

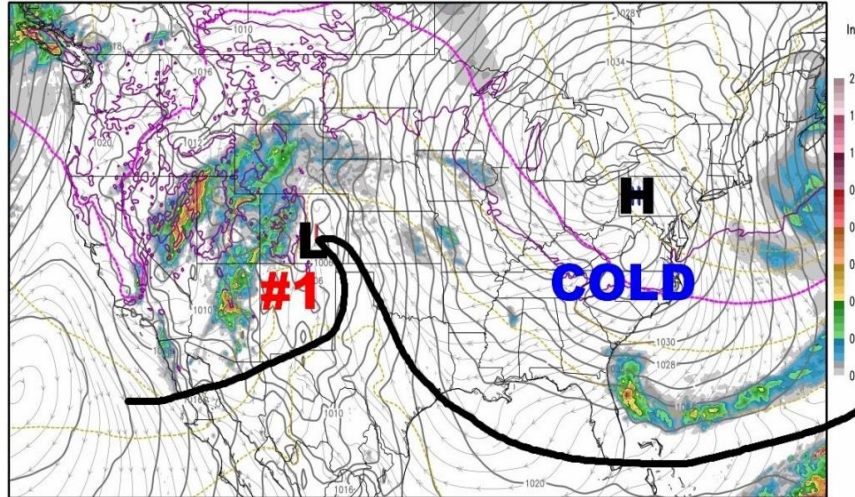
MIDDAY UPDATE WEATHER 3/20/17

OVERVIEW

In the large scale there is not much to change the forecast and last week or from Sunday. The weather models on very strong agreement that the Pacific jet stream is taking over the pattern and it is going to send in a least 4 significant weather systems over the next 14 to 20 days. This will result in widespread significant persistent rain to much of the Plains the Midwest and the Delta regions. There is some difference of course with respect to which areas are going to see the heaviest rains and that will be worked out over the next several days. But the overall pattern the is quite clear. As long as the Pacific jet remains very strong -because of the enhanced and record setting QBO- we will continue to see a deep persistent trough on the West Coast that will eject significant LOW pressure areas that will bring significant rain. In addition because the overall pattern ... the persistent trough over the West Coast and Rockies places a RIDGE in the Jet stream off the southeast US coast. That ridge in THAT position means that the Gulf of Mexico is "open for business "so the moisture flow from the Gulf of Mexico into the plains and Midwest over the next three weeks will be persistent and significant. This is WHY the rainfall amounts on the weather models are so high and cover such a large area.

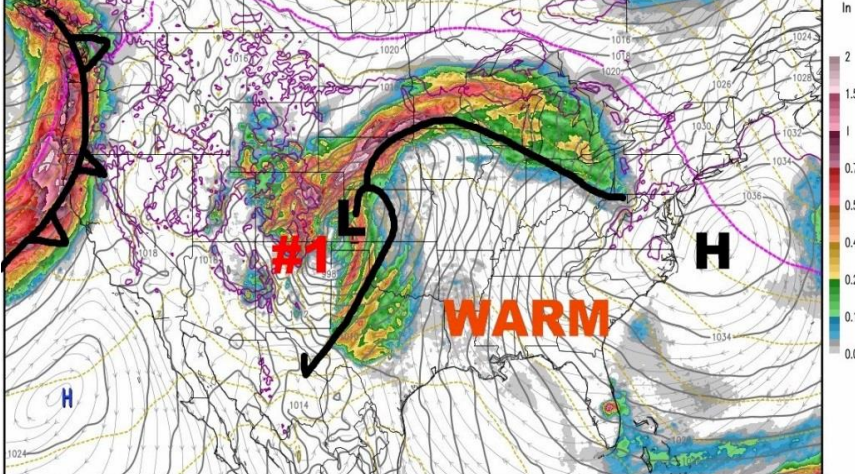
NEXT 5 DAYS – SYSTEM #1

MSLP, 6hr Precip, Wind, Thickness, 32f Valid Thursday 12Z 03/23 EuroWX.com



ECMWF HRES MODEL RUN 00Z 03/20 84hr FORECAST C 2017 ECMWF
This service is based on data and products of the European Center for Medium-range Weather Forecasts.

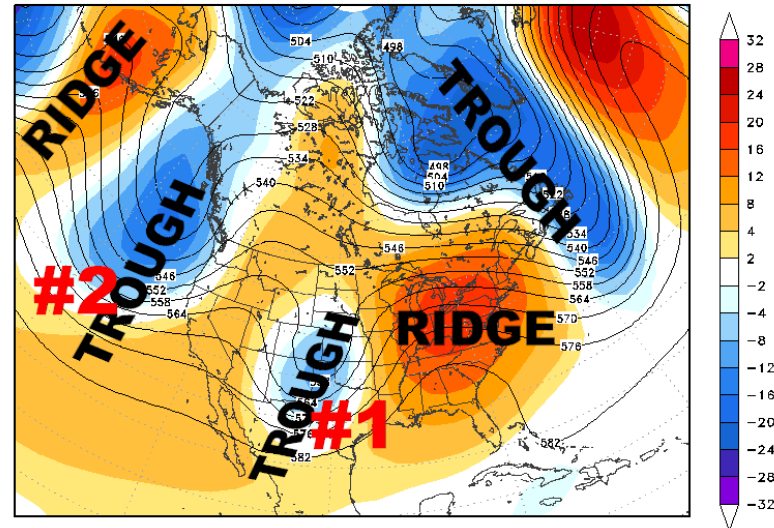
MSLP, 12hr Precip, Wind, Thickness, 32f Valid Friday 12Z 03/24 EuroWX.com



ECMWF HRES MODEL RUN 00Z 03/20 108hr FORECAST C 2017 ECMWF
This service is based on data and products of the European Center for Medium-range Weather Forecasts.

The two images on the LEFT shows the surface maps valid Thursday morning March 23 and Friday March 24. The large cold HIGH h pressure area over the Midwest has moved off the East Coast and winds have become southerly bringing in lots of moisture from the Gulf of Mexico into the Plains and Midwest. The upper air map - BOTTOM RIGHT - shows the strong trough in the jet stream moving into the heart of the Plains from the West Coast and Rockies... while to the east there is an equally strong a massive RIDGE covering most of the Midwest and the East Coast.

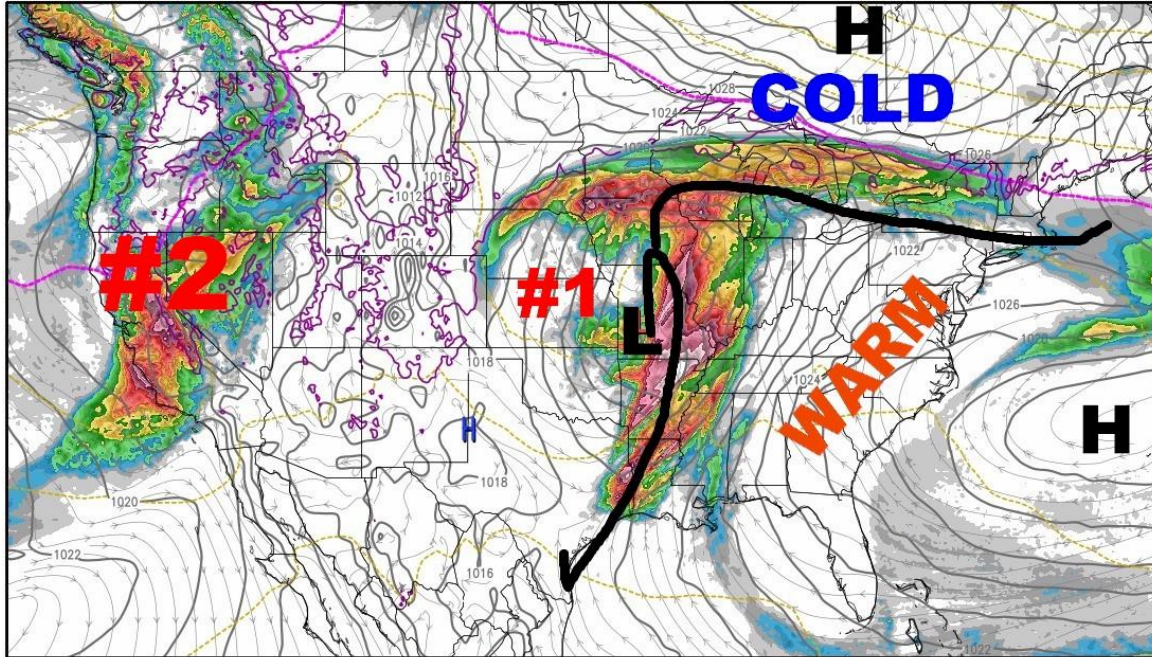
500 mb Height Anomaly (dm) Valid: 12z Fri 24 Mar 2017 ECMWF-EPS Hour: 120



GRADS: COLA/IGES

StormVistaWxModels.com

Init: 12z Sun 19 Mar 2017 2017-03-19-15:20



ECMWF HRES MODEL RUN 00Z 03/20 132hr FORECAST

C 2017 ECMWF

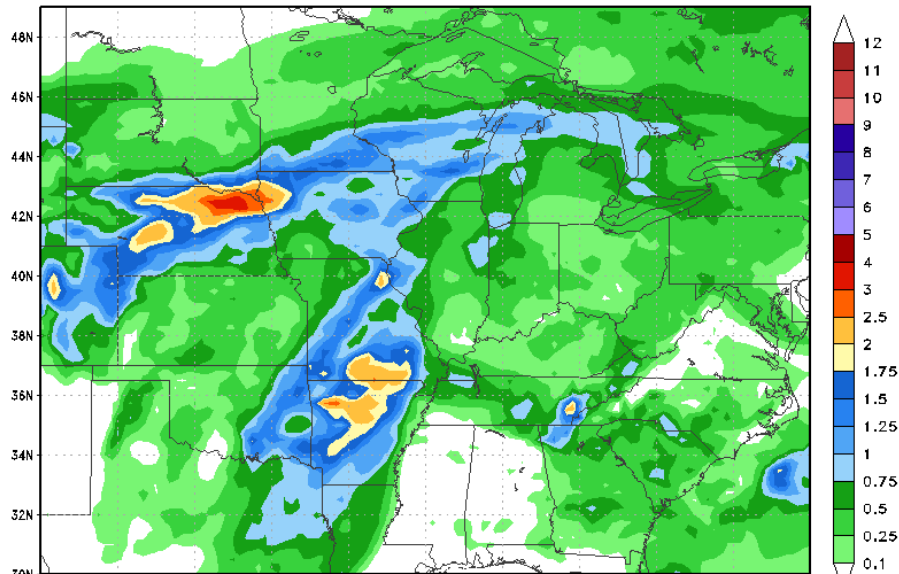
This service is based on data and products of the European Center for Medium-range Weather Forecasts.

By the morning of Saturday, March 25 there is a large LOW pressure area located in Missouri. Significant rain and thunderstorms are moving through the entire Mississippi Valley. There is likely to be significant severe weather with this system across much of the Mississippi Valley and the Midwest. To the east the large- HIGH pressure area off the southeast coast.. anchored by the strong ridge in the upper levels of the atmosphere off the southeast US coast ...is bringing up warm moist air feeding into the system.

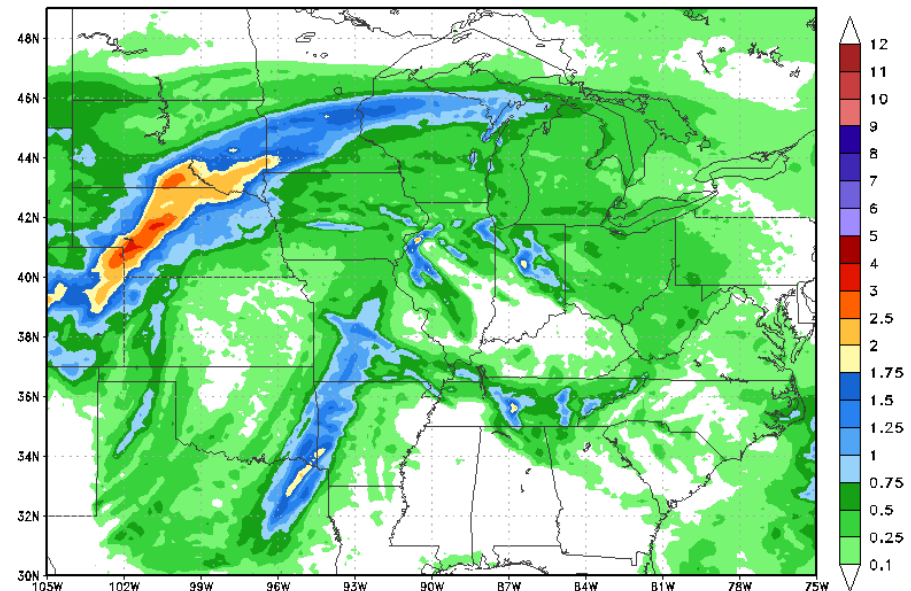
RAINFALL and ANOMALIES 1-5 DAY

Not surprisingly the southern half of the Plains / Rockies / and the lower Midwest as well as the Deep south are quite warm relative to normal for mid and late March. Both the GFS and the European model have increased the rainfall amounts over eastern Colorado ...most of Nebraska ...far southeastern portions of South Dakota ... most of Iowa ... southern Minnesota ..and southern Wisconsin. Rainfall amounts range from 0.5-2.5"/ 12-60mm with 60 to 70% coverage . Both models also show a secondary area of rain over and far northeastern Texas Eastern Oklahoma western and Central Arkansas a good portion of Missouri. The coverage here is a little more uncertain between the two models as it is the are the rainfall amounts with the GFS model showing more coverage with somewhat heavier rainfall amounts.

120 Hour Total Precipitation (in) GFS-MAXRES
 Valid: 06z Mon 20 Mar 2017 - 06z Sat 25 Mar 2017 Hour: 0 - 120

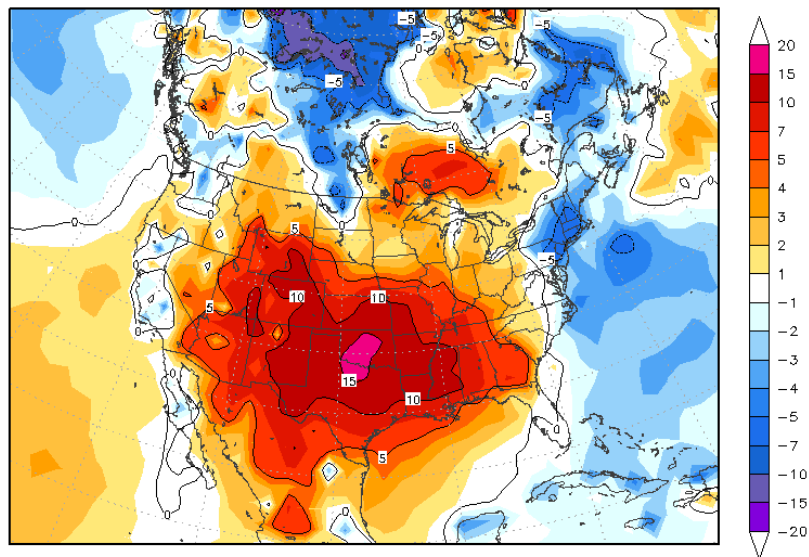


120 Hour Total Precipitation (in) ECMWF-MAXRES
 Valid: 00z Mon 20 Mar 2017 - 00z Sat 25 Mar 2017 Hour: 0 - 120

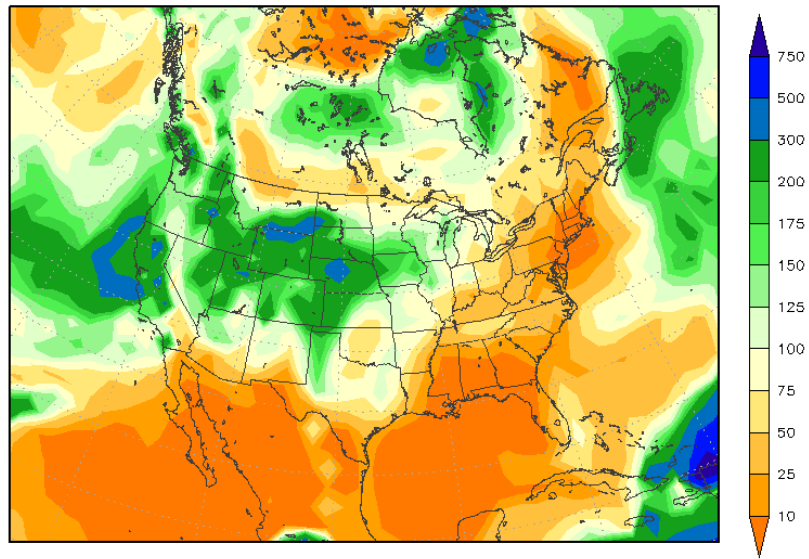


Max: 3.3 in Min: 0.0 in StormVistaWxModels.com Init: 00z Mon 20 Mar 2017 2017-03-20-08:20

1-5 Day Mean 2 m Temperature Anomaly (F) ECMWF-EPS
 Valid: 00z Mon 20 Mar 2017 - 00z Sat 25 Mar 2017 Hour: 0 - 120



StormVistaWxModels.com Init: 00z Mon 20 Mar 2017
 1-5 Day Precipitation Anomaly (% of Normal) ECMWF-EPS
 Valid: 00z Mon 20 Mar 2017 - 00z Sat 25 Mar 2017 Hour: 0 - 120



GRADS: COLA/IGES

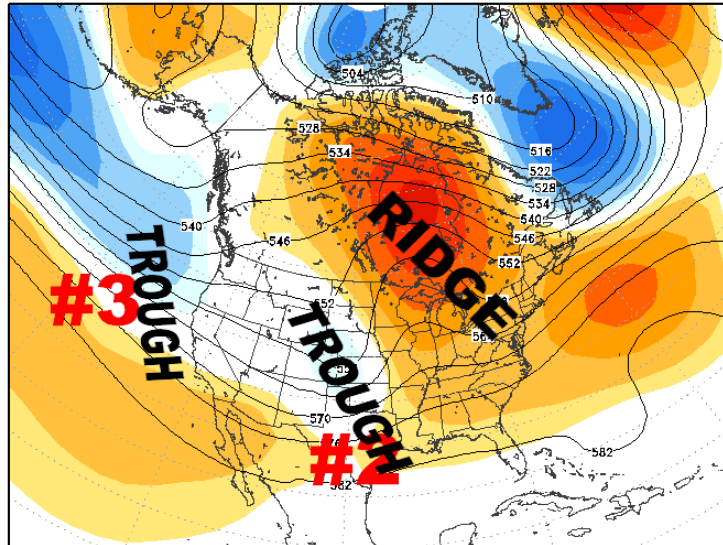
StormVistaWxModels.com Init: 00z Mon 20 Mar 2017 2017-03-20-03:20

SYSTEM #2

System #2 follows rapidly behind System #1 as the Pacific jet stream is really fired. System #1 is now on the East Coast with a #2 moves out of the Rockies into the heart of the central Plains and then into the heart of the WCB.

500 mb Height Anomaly (dm)
Valid: 00z Mon 27 Mar 2017

ECMWF-EP5
Hour: 180



GRADS: COLA/IGES

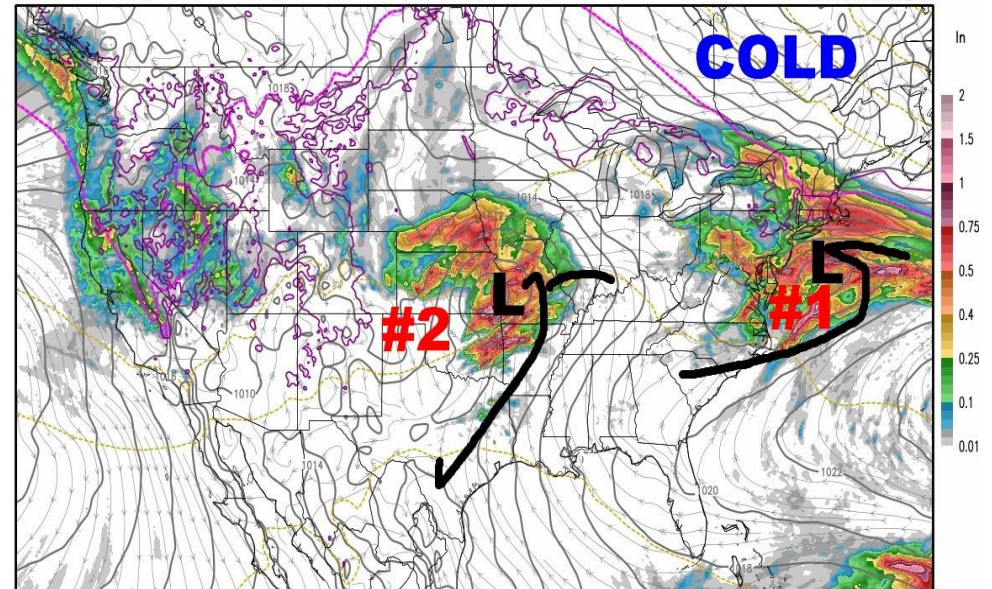
StormVistaWxModels.com

Init: 12z Sun 19 Mar 2017
2017-03-19-15:30

MSLP, 12hr Precip, Wind, Thickness, 32f

Valid Monday 12Z 03/27

EuroWX.com



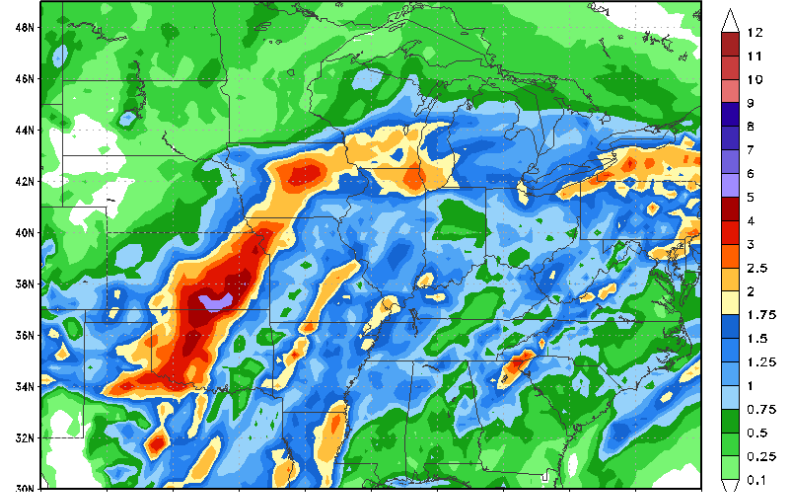
ECMWF HRES MODEL RUN 00Z 03/20 180hr FORECAST

This service is based on data and products of the European Center for Medium-range Weather Forecasts.

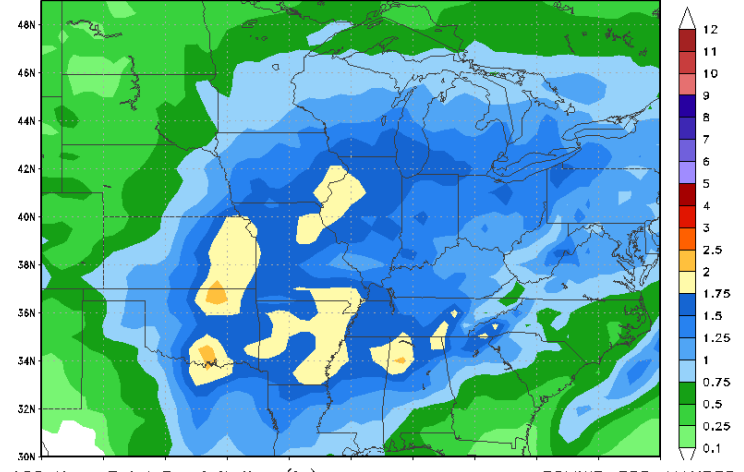
© 2017 ECMWF

With respect to the rainfall forecasts ... the 6 to 10 day rainfall forecasts also cover beginning of system #3 (see below) which comes out of the Rockies on D9-10 . The operational models on the LEFT hand side clearly show a band of enhanced rain but they differ as to which areas will see it. The GFS band of 1=4"/25-100mm h rains cover Iowa.... central and eastern Kansas ..central and eastern Oklahoma ..and into the Texas panhandle. The European model has the same band of rain but it is shifted to the east by a 150 miles. In addition the European model also has more rain over eastern Colorado / western Kansas than the GFS does. The GFS ensemble also has somewhat heavier rains than the European model does over western portions of Illinois ...Missouri eastern Oklahoma ...Kansas... Arkansas ...and Mississippi. That being said all areas of the Midwest will see significant rain during the 6 to 10 day with excellent coverage. The rainfall over the heart of the NRW will be more moderate.

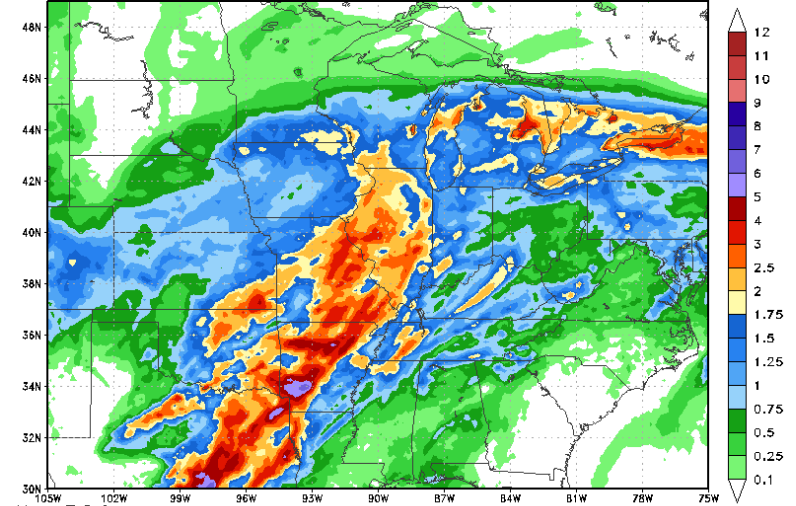
120 Hour Total Precipitation (in) GFS-MAXRES
Valid: 06z Sat 25 Mar 2017 - 06z Thu 30 Mar 2017 Hour: 120 - 240



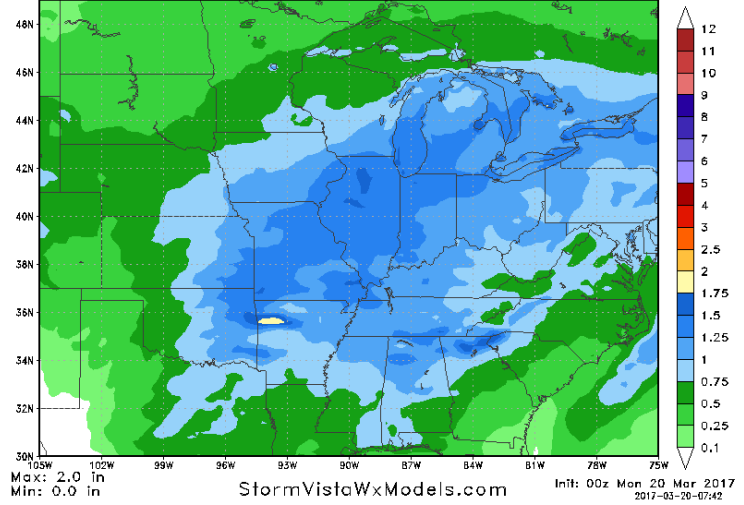
120 Hour Total Precipitation (in) GFS-ENS-MAXRES
Valid: 06z Sat 25 Mar 2017 - 06z Thu 30 Mar 2017 Hour: 120 - 240



120 Hour Total Precipitation (in) ECMWF-MAXRES
Valid: 00z Sat 25 Mar 2017 - 00z Thu 30 Mar 2017 Hour: 120 - 240



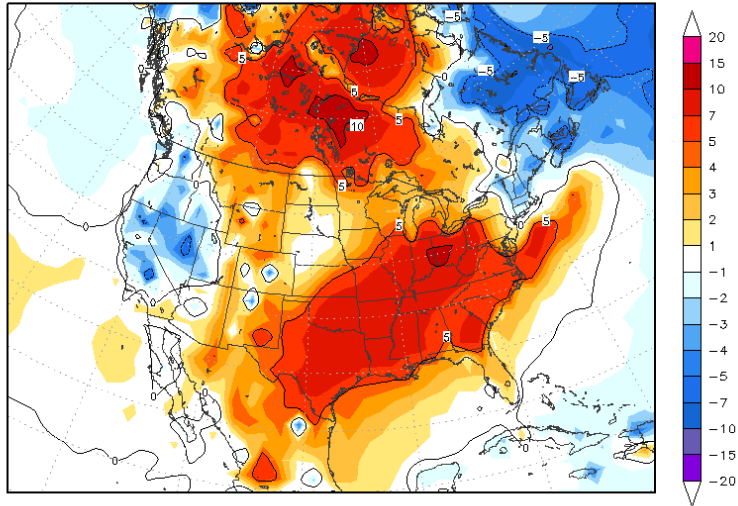
120 Hour Total Precipitation (in) ECMWF-EPS-MAXRES
Valid: 06z Sat 25 Mar 2017 - 06z Thu 30 Mar 2017 Hour: 126 - 246



Max: 7.0 in
Min: 0.0 in
StormVistaWxModels.com
Init: 00z Mon 20 Mar 2017

Max: 2.0 in
Min: 0.0 in
StormVistaWxModels.com
Init: 00z Mon 20 Mar 2017
2017-03-20-07:42

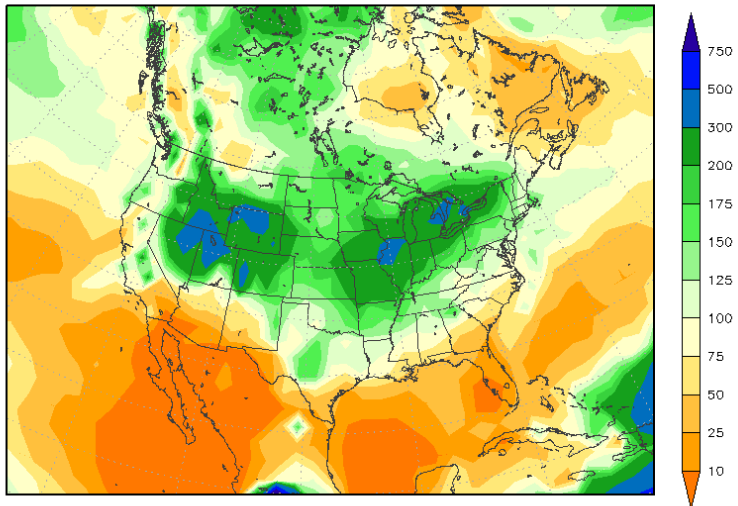
6-10 Day Mean 2 m Temperature Anomaly (F) ECMWF-EPS
 Valid: 00z Sat 25 Mar 2017 - 00z Thu 30 Mar 2017 Hour: 120 - 240



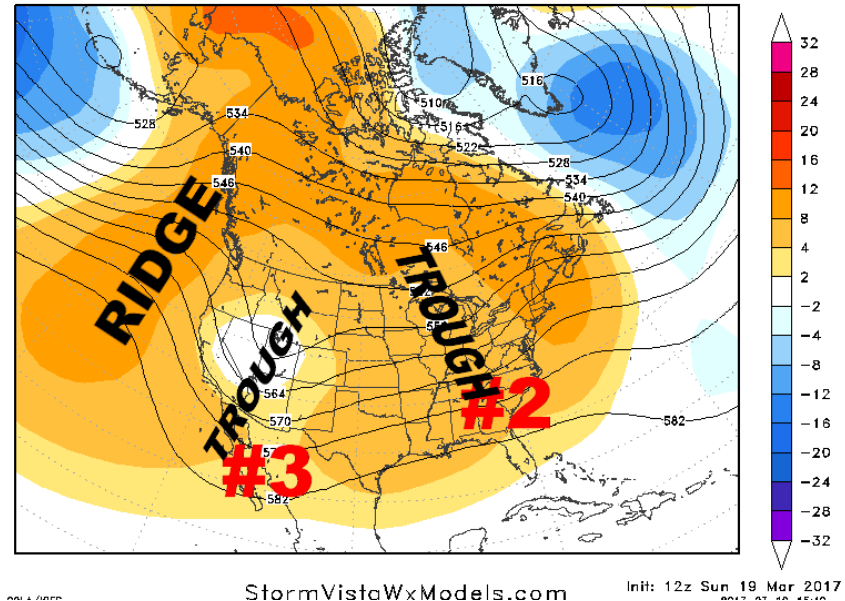
The temperature anomalies are quite warm across the Deep South and the lower Midwest into the Southeastern states and the rainfall anomalies are quite wet from Nevada to Ohio / Pennsylvania.

The upper air map at DAY -10 (lower right) clearly shows system number #2 moving through the Midwest and another major trough coming out of the West Coast into the Rockies. This will be system #3

StormVistaWxModels.com Init: 00z Mon 20 Mar 2017
 2017-03-20-0340
 6-10 Day Precipitation Anomaly (% of Normal) ECMWF-EPS
 Valid: 00z Sat 25 Mar 2017 - 00z Thu 30 Mar 2017 Hour: 120 - 240



500 mb Height Anomaly (dm) ECMWF-EPS
 Valid: 12z Wed 29 Mar 2017 Hour: 240



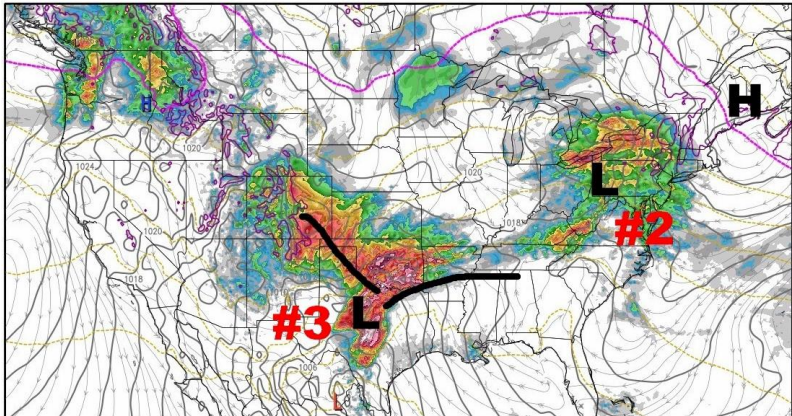
StormVistaWxModels.com Init: 00z Mon 20 Mar 2017
 2017-03-20-0340

StormVistaWxModels.com Init: 12z Sun 19 Mar 2017
 2017-03-19-1540

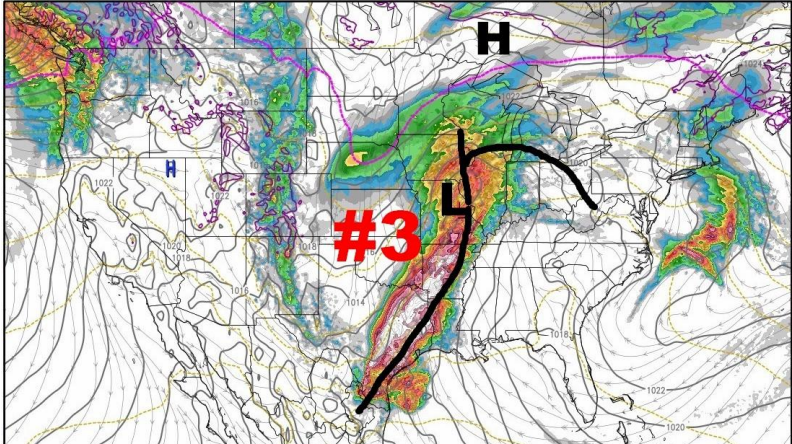
SYSTEM #3

Last week the weather models were indicating that system #3 was going to track somewhat further to the south and as a result... bring more rain into the heart of HRWW areas. That appears to still be the trend on the Monday morning models. The 2 images on the left hand side shows system #3 coming out of a lower Plains tracking into the western corn belt and the heart of the Mississippi Valley. The two images on the RIGHT show the rainfall forecasts and again there is strong agreement that the heaviest rains are going to fall over central and Eastern Oklahoma ...central and Eastern Texas ..and the Mississippi delta. But all areas of Midwest should see decent rainfall from system #3 at the end of the month.

MSLP, 12hr Precip, Wind, Thickness, 32f Valid Wednesday 00Z 03/29 EuroWX.com

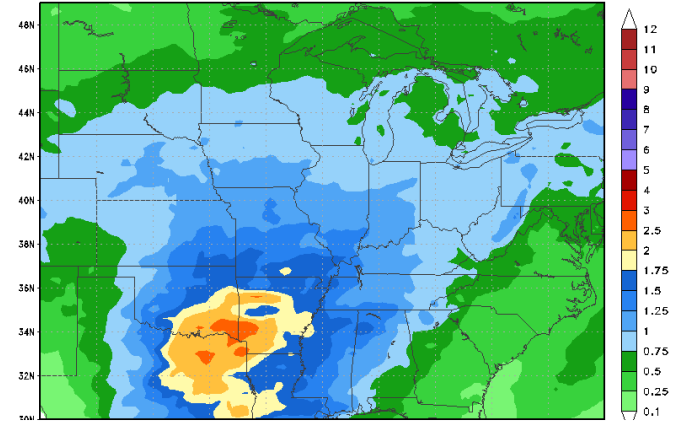


MSLP, 12hr Precip, Wind, Thickness, 32f Valid Thursday 00Z 03/30 EuroWX.com

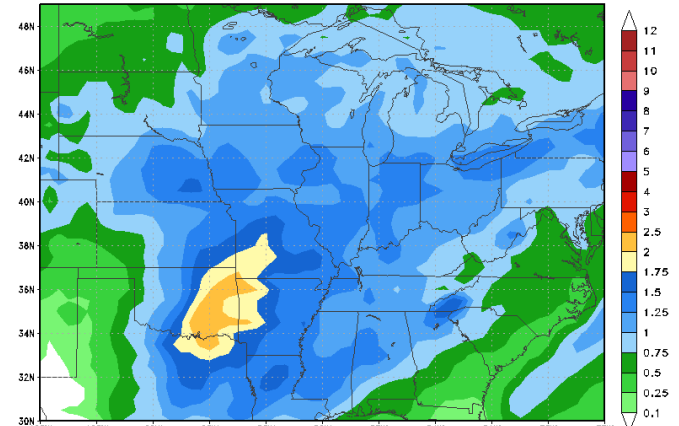


ECMWF HRES MODEL RUN 00Z 03/20 240hr FORECAST C 2017 ECMWF
This service is based on data and products of the European Center for Medium-range Weather Forecasts.

120 Hour Total Precipitation (in) ECMWF-ENS-MAXRES
Valid: 00z Thu 30 Mar 2017 - 00z Tue 04 Apr 2017 Hour: 240 - 360

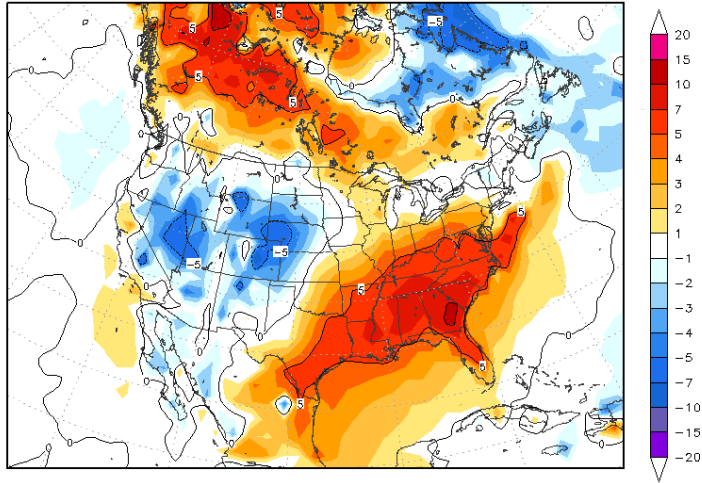


120 Hour Total Precipitation (in) GFS-ENS-MAXRES
Valid: 06z Thu 30 Mar 2017 - 06z Tue 04 Apr 2017 Hour: 246 - 366



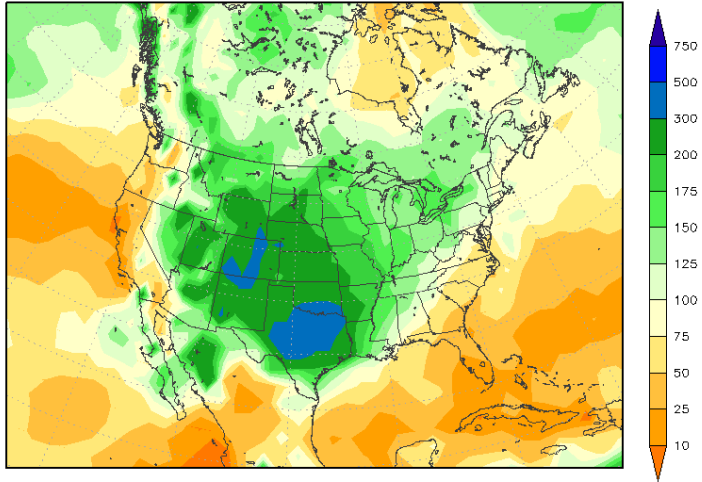
Max: 2.2 in Min: 0.0 in StormVistaWxModels.com Init: 00z Mon 20 Mar 2017 2017-03-20-05:35

11-15 Day Mean 2 m Temperature Anomaly (F) ECMWF-EPS
 Valid: 00z Thu 30 Mar 2017 - 00z Tue 04 Apr 2017 Hour: 240 - 360



The temperature anomalies are pretty much unchanged with the Deep South quite warm and temperatures near normal over most of the Midwest and the plains. The rainfall anomalies are still quite wet especially over the central and lower Plains and the heart of the HRWW areas. But they also are above normal across all the Midwest and the Rockies.

StormVistaWxModels.com Init: 00z Mon 20 Mar 2017
 2017-03-20-0400
 11-15 Day Precipitation Anomaly (% of Normal) ECMWF-EPS
 Valid: 00z Thu 30 Mar 2017 - 00z Tue 04 Apr 2017 Hour: 240 - 360



StormVistaWxModels.com Init: 00z Mon 20 Mar 2017
 2017-03-20-0400

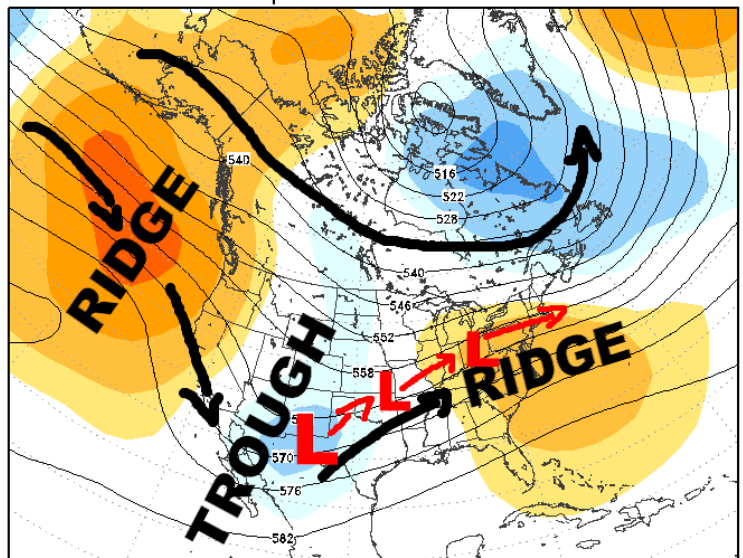
SYSTEM #4

System #4 shows up at the extended range at DAY 15 in early April. The deep trough over the West Coast is firmly established and waves of LOW pressure get ejected from the trough over the southwestern states in a ENE direction tracking through the central and lower Plains

and the heart of the Midwest. Not surprisingly the rainfall anomalies on both the CFS weekly and the European I weekly models are quite wet for most of the central and eastern portions of the country

500 mb Height Anomaly (dm)
Valid: 12z Mon 03 Apr 2017

ECMWF-EPS
Hour: 360

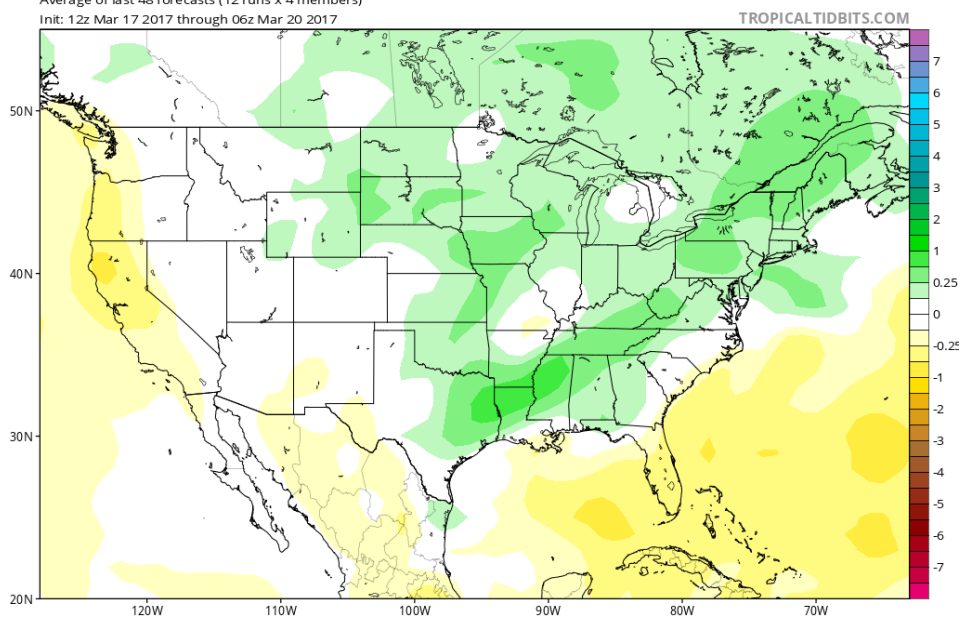


GrADS: COLA/IGES

StormVistaWxModels.com

Init: 12z Sun 19 Mar 2017
2017-03-19-16:00

CFSv2 Accumulated Precip. Anomaly (in) from 06z03Apr2017 to 06z10Apr2017 (Days 15-21)
Average of last 48 forecasts (12 runs x 4 members)
Init: 12z Mar 17 2017 through 06z Mar 20 2017



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